6: Kirchhoff--25 U-4 (no date) 1895 Formosans
116, 131

The oval area of Formosa, which is broader in the southern half and stretches out to form a narrow point of land at the extremity, measures 35,000 sq. km.* ... In length

* This figure is the result of a planimetric measurement which I based on the map of Formosa in the proportion of 1: 696,960, as given in the informative "Report by Alexander Hosie on the Island of Formosa, presented to both Houses of Parliament," London 1893. The figure that has usually been given up to this, estimating the area of the island at 34,550 sq. km. only, certainly falls short of the truth, while much more certainly exaggerated is the statement of Imbault-Huart that the island measures "approximately" 38,803 sq. km. ...

it measures about 380 km.; and at the broadest point about 150 km.

On the west coast [MC: of Formosa] the land is extending out into the sea with astonishing rapidity, so that the lagoons in the southwest frequently indicated on our maps became dry long ago. The site of the locality of An-ping, near the largest town on the island, Tai-nan (formerly Tai-uan-fu), formed a small island in the 17th century, according to contemporary Dutch maps, opposite the coast of the main island. Deposits made by the sea and the rivers will scarcely suffice to explain the addition of dry land to the consistently flat west coast, with sandbanks constantly arising afresh from the surrounding shallows; it probably depends, for the most part, on a slow but ceaseless uplift, for whose activity on the north coast we have the witness of von Richthofen (Zeitschrift der Deutschen Geologischen Gesellschaft 1860, Vol. 12, pp. 540 & 545). The east coast, mountainous almost everywhere, sinks steeply into the deep sea and shows no signs of growth.

The smaller western half of the island is for the most part low-lying, and is plain in part, but only to a breadth of between 32 and 40 km., and in part hilly country; the larger eastern half for the most part is filled with mountains.

6: Kirchhoff--25 [3] U-4 (no date) 1895 Formosans
116, 101

Formosa received its name ("beautiful") from the Portuguese who, in the 16th century, sailed by and saw the fine mountain chains rise above the luxuriant vegetation of the foreground.

6: Kirchhoff--25-26 U-4 (no date) 1895 Formosans-1-4
116, 133

The longest of the Formosan mountain chains is in the direction of the longitudinal axis of the whole land, that is from southwest to northeast. Generally one speaks of a "high central chain" said to run along the whole length of the island. But there is none of this extent. Only where the island attains its greatest breadth does there seem to be such a central chain, approximately equidistant from the two coasts and in the direction mentioned. It is designated by the name of Ta-schan ("Large mountain range") among the Chinese settlers (almost the whole of our nomenclature for the island coming from their language and not from that of the natives). Imbault-Huart was obviously systematizing far too much when he asserted that the central chain covered almost the whole island from north to south, the lateral chains joining it at right angles like fish bones, while the central chain broke up only in the north into several subsidiary chains equal among themselves and like crow's feet. Consequently he often uses the term "central chain" for the mountainous region filling all eastern Formosa. This is a misuse of the term. The other feature he indicates seems much more exact, [26] namely that the "central massif" (a very vague area of the "Ta-schan") consists of several chains of very unequal height throughout their lengths and divided by deep valleys, which present steep wall on the east coast and gradually sink down towards the western plain; in the north shorter and lower ridges running in various directions constitute the Formosan Switzerland (which has a very doubtful right to this name); along the coasts of the southern

tongue of land parallel lines of hills run along the coast to form two headlands between which there lies the bay of Kueĭ-leang, a much sought haven of refuge for ships during the northeast monsoon.

This latter description also corresponds rather better to the map Imbault-Huart provided with his book. On it the Ta-wu-man-schan ("Range of the Great Hero") comes closest to the notion of a central chain, for it represents a long-stretching chain in the position and direction already mentioned; these chains are said not to run at the same height, like walls, but to undulate greatly, varying between several thousand and a few hundred meters; the small Dragon Lake at the eastern base of the main chain is given a height of 1,000 m. The highest peak of the whole island, the Jü-schan ("Jade Mountain"), the Mount Morrison of the English, rises in a shorter eastern neighboring chain; since it remains covered with snow until late in the summer, it probably attains a height of at least 4,000 m.; it is credited with a height of 4,280 m. Farther to the north there follow tablelands "1,000 m. high," beyond which rises the majestic cone of the Thoa-sia, the Sylvia Mountain of the Europeans, to an alleged height of 3,766 m. * In

* According to the English coastal survey on the "Sylvia" (which gave its name to the mountain), the height is more than 13,000 feet, i.e., about 4,000 m.

the north, and close to the coast at the left side of the Tam-sui estuary, rises the Kuan-yn-soan (Soan is an alternate form of Schan ("mountain, Mountain range"), so often met with. So called from its resemblance to the sitting goddess Kuan-yn, it is surrounded by lower peaks, which are called Lo-han ("The Wise Men"), the retinue of the goddess. The Ta-tun Range rises higher on the right side of the Tam-sui estuary; it runs towards the northeast, and an S continuation of it is formed by the 1,000 m. high Ta-tun-soan, a volcano that apparently is not yet extinct; the crater at the peak, which is transformed into a lake in the rainy season, is 150 m. deep and about 300 m. in diameter; some decades ago it is said to have emitted a stream of sulphur to the accompaniment of earth tremors. Behind the Ta-tun chain the Tschao-soan ("Volcano Peak") rises quite isolated to a height of 1,330 m.; it has several extinct craters and is the highest peak in the north of Formosa, looking to the sea on one side and towards the Sylvia giant on the other. Along the northeast coast there runs the Ki-lung Range, with fantastic cliff shapes with obelisk-like and flattened tops, and through whose narrow gorges burble mountain streams; the bay of Ki-lung Harbor itself is formed by a gorge-like gap in this chain. The island of Ki-lung, which is a volcanic rock 200 m. high, stands like a watchman in front of the harbor entrance.

In the southwest of Formosa, the Chinese geographers include in the Ta-schan the Mu-kang-schan ("Forest Range"), a steep chain that rises into the clouds, and the

rampart-like Ta-kang-schan. Southwards from the latter lies the Siao-kang-schan ("The Small Range"), consisting of two mountains only, one an important landmark for sailors, when they wish to set out for Formosa from the coral Pescadores or Fisher Islands, the Pung-ho of the Chinese. In the neighborhood of the town of Fung-schan there rises the ridge to which the town owes its name ("Phoenix Mountain"); the Chinese see in it the shape of a flying phoenix.

Finally, in the southeast, there are two higher ranges: the Kuei-lei-schan (Kia-lo in the natives' language), between 1,200 and 1,300 m. high, and the Pi-nan-mi-schan, which is covered with firs.

6: Kirchhoff--26-27 U-4 (no date) 1895 Formosans
116, 133, 135

Slight and fragmentary is our knowledge of the soil composition and the geology of Formosa. The two coastal mountains at the mouth of the Tam-sui are trachytic, and the proof of considerable recent variations in elevation is given by layers of pebbles and mussel breccia on its slopes high above the actual sea level. The Ki-lung Range consists of sandstone with intercalations of extensive coal beds. The presence of Miocene and Pliocene Tertiary formations has also been shown, and particularly in the north of the island recent, indeed continuing volcanic activity. It still remains to be examined how much faith can be set on Chinese reports of "nightly gleams of fire" as phenomena of volcanic eruption, even in the mountains of the southeast. But Formos beyond any doubt, belongs to the great Eastern Asiatic Belt with still persisting volcanic phenomena. Deposits of sulphur and solfataras are found in considerable numbers in northern Formosa; in many places there steam forces its way hissing out of the ground, generally mixed with sulphur gases, at times as a steam hole. In addition to genuine geysers, [27] steam holes send up white pillars of vapor to a height of 8 to 10 meters from the fissures of the Tschao-soan.

6: Kirchhoff--27 U-4 (no date) 1895 Formosans
116, 133

Earthquakes are frequent, particularly towards the end of the year. The terribly destructive earthquake of 1782, accompanied by bad weather, lasted for 12 hours. The equally destructive earthquake of 1654 began with frightful shocks on December 14 and, with short intervals, lasted for three weeks, one witness assuring us that the ground trembled without ceasing for the three weeks, as could be easily seen from the oscillating of the water surface in filled vessels. According to Chinese statements, the district of Kia-y (in the southwestern part of the island) is now especially subject to earthquakes.

6: Kirchhoff--27 [2] U-4 (no date) 1895 Formosans-1-2
116, 103, 133

Formosa suffers from a shortage of large rivers that are always navigable; in Chinese all the Formosan rivers are called, not kiang or ho, but ki ("stream"). Most of them become a trickle in the dry season or dry up altogether, their beds then being used for land transport. Yet in the rainy season they carry such a mass of material in precipitation that their mouths are ever and again being blocked by shifting sandbanks. Consequently larger ships cannot travel up any river at all; even the keelless junks do not dare to risk crossing many of the bars; these are then crossed on curious bamboo rafts, called Katamarans.

The only better known river system is that of the Tam-sui, as Europeans say (in Chinese it is called Tan-tschui-ki, "Stream of Fresh Water"). It arises from the junction of the Tokoham and Sintiam Rivers and below this is navigable for larger junks; on the right it also receives the Ki-lung River, which has its source at the Ki-lung-schan and, in spite of its numerous rapids, is traveled on by curious boats with quite flat bottoms that are 10 m. long and 2 m. wide. *

* The branch of this river leading to the harbor of Ki-lung, and which looks like a bifurcation, does not exist, and was given on Imbault-Huart's map by mistake.

The name of Tan-tschui-ki is also borne by the only large river flowing towards the

south, and which enters the sea near Fung-schan. Near Tai-nan Ta-mu-ki makes its way to the sea through the stretch recently regained; it originates in several mountain brooks. But the largest river in the west is said to be the Niëu-tschao-ki which flows to the south of the town of Kia-y. It is quite broad, particularly towards the mouth, but is difficult of navigation because of its shallowness and many sandbanks. ** The

** Neither Imbault-Huart's map nor that of Hosie indicate this river.

rivers on the eastern side of the island are naturally only raging mountain streams.

Lakes are rare; yet the western low-lying land also possesses some, which we have not been able to enter on the map, owing to a lack of exact indications. There are also said to be small, cauldron-shaped crater lakes.

6: Kirchhoff--27 [3] U-4 (no date) 1895 Formosans
116, 132

Formosa is in the torrid zone, for even the north (Ki-lung) has an average temperature of 21.4° C., and an average variation of temperature of 14° (January 14.2°, July 28.2°). Lying in the Southeast Asiatic monsoon belt, the island occupies a very curious place with regard to the distribution of rainfall throughout the year. For the southwest monsoon of the summer alternates with the northeast monsoon of the winter, and the northeast monsoon, sweeping over the sea warmed by the Kuro-schio (which makes possible the continued existence of reef-building coral in the bays of Su-aô and Ki-lung) also brings rain, and indeed the principal rain, at least for the northeast coast, so that Ki-lung, for example, and perhaps also a large part of the island—the northern part, we may assume—has two rainy periods. One of these is in the winter and lasts until the spring, the other in late summer, lasting until late in the fall. This remarkable fact does not emerge when, like Wojeikóf, only January is compared with July, the month with the lowest rainfall.

6: Kirchhoff--27 [4] U-4 (no date) 1895 Formosans
116, 132

Ki-ling has an annual rainfall of 3,050 mm., the heaviest rainfall occurring between January and May, and the next heaviest between August and October:

January	572 mm	April	292 mm	July	95 mm	October	206mm
February	301 "	May	302 "	August	219 "	November	130 "
March	272 "	June	113 "	September	384 "	December	164 "

But it would be a mistake if the greater rainy season were to be attributed to the northeast monsoon alone and the smaller to the southwest monsoon alone. The southwest monsoon predominates as early as May, and is much stronger in June and July; nevertheless these two summer months have only 7 rainy days each. August, with almost double the rainfall of July (with 95 mm.) on 16 days, is still under the sway of the southwest monsoon, while September, as all over the island, is the month during which the monsoons change.

The period from November to the beginning of May is given by Imbault-Huart as the rainy period for the town of Tam-sui. There as in Ki-lung the summer is oppressively hot; during the day the temperature is usually 30°; in the winter it sinks [28] rarely below 10°, and even in the neighboring mountains little snow falls.

On p. 7 of his report Hosie gives the following table, for four years at Tam-sui, of the rainfall and the extremes of temperature:

	1887	1888	1889	1890	1891	Average	Extremes in temp. 1887-91	
	Rain in mm.							
January	169	80	194	273	14	146	25.0°	5.0°
February	139	357	133	50	169	169	26.1	4.4
March	200	73	199	368	321	232	28.3	6.1
April	153	147	295	64	82	148	31.1	8.9
May	119	103	179	180	350	186	33.3	15.0
June	10	444	208	107	284	210	35.0	16.7
July	326	13	32	188	135	139	37.8	21.1
August	45	165	248	96	189	149	37.8	19.4
September	207	217	21	125	439	202	35.0	18.9
October	228	71	112	307	33	150	35.0	12.2

6: Kirchhoff--27-28 U-4 (no date) 1895 Formosans-2
116, 132

	1887	1888	1889	1890	1891	Average	Extremes in temp. 1887-91	
		Rain in mm						
November	56	70	237	52	118	107	30.6°	12.2°
December	44	172	64	104	60	89	27.2	5.6
Year	1696	1912	1922	1914	2194	1927	37.8	4.4

If we now compare the Ki-lung rainfall curve with that of Tam-sui, it appears that the latter town has a much more equable distribution of rainfall throughout the year, and the displacement of the chief maximum from January to March; December, in Tam-sui, appears as the driest month, the chief rainy season falling in spring rather than in winter. But here too the curve of rainfall sinks during the summer months as in Ki-lung, reaching the lowest summer level in July, just as it does there (though not quite so low a level as in December), and also reaching in September the highest level of the new rise that sets in in late summer.

While Tam-sui receives the heavy rains in the cool months, the closest mountains being hidden behind thick clouds, even the sun hardly appearing, in the southwest the situation is exactly reversed. Tai-nan has an agreeable, healthy climate in winter, especially in December and January, except that the northeast monsoon spreads a great deal of dust and sand from the great plain over the town (an indication of the dryness of the winter in this part of the island). But the summer brings tropical heat and tropical falls of rain, the latter in July and August especially;* for days on end the thermometer

*Heavy fall rains are also mentioned as occurring in the region of Kia-y, the mountain streams swelling so greatly that they often in places burrow out a new bed for themselves over stretches of the soft soil of the level ground at the foot of the mountains. (Imbault-Huart).

does not sink below 32 1/2°, the heat by day rises to 38°, and the sultry nights are hardly bearable.

6: Kirchhoff--28 [2] U-4 (no date) 1895 Formosans
116, 137

In general the flora of Taiwan is related to that of the Indo-Malayan region, and more distantly probably also to that of South China. Formosa is an evergreen land, the generally warm and humid air in the mountains feeding a thicket that can be penetrated only with difficulty; it is a land of palms, tree ferns and bamboo. The banana, i. e. the Musa textilis of the Philippines (Hosie, p. 6), thrives in the south at least, and also the Pandang, quite a number of tropical fruit trees, the climbing palm Calamus Draco, which festoons the thickets of the east in particular, and the betel-nut palm, both of them being found in the Malayan Archipelago and on Hainan, but the latter being unknown on the Chinese mainland (Hosie, pp. 5 ff). Even round the Dragon Lake one can see lofty palms raise their feathery crests; but the king of the Formosa forests is the camphor tree (Cinnamomun Camphora) with its imposing, oak-like form and its shiny, dark green leaves. In addition to this no fewer than 65 various species of building wood are counted in the forests. Indigenous are also the important fiber plant Boehmeria nivea, the so-called China nettle, a near relative of our stinging nettle, and the beautiful Araliacee Fatsia papyrifera, whose stem turns into wood and grows to the height of a man within one year, and which bears a chain of long-stalked leaves on its crest divided like hands, and whose unusually plentiful pith provides the valuable material for the manufacture of Chinese pith paper (incorrectly called rice paper).

6: Kirchhoff--28-29 U-4 (no date) 1895 Formosans-1-2
116, 136

The fauna of Formosa, as far as mammals and birds are concerned, was thoroughly investigated by Robert Swinhoe, English consul in China, who died at an all too early age in 1877. Wallace has already made use of Swinhoe's results in studies of animal distribution. The fauna of Formosa especially, it appears to me, prove that this is among the detached islands. While it does possess a number of species found there alone (14 of the 35 mammals, 43 of the 128 species of birds), these, too, are as a rule closely related to species living on the Asiatic mainland or in the other islands of Southeast Asia, and a large number of species both of animals and plants is common to these lands and to Formosa. Yet one is struck by a phylogenenetically very interesting fact! the Formosan fauna reveal much closer relations to Hither and Farther India, the Malayan Archipelago and even to Japan, than to China, which lies so near. The black bear of Formosa is the Ursus tibetanus or at least its close relative; the prettily marked dove of the island, [29] Palumbus pulchricollis, is the wood dove of the Darjeeling region of the Himalayas. Of the felines, the island has Felis chinensis in common with China, but F. Viverrina (the Asiatic wildcat) in common with the Himalayas and Malacca, F. macroscelis with Siam and the Malayan Archipelago. The orange-colored tree civet cat (Helictis subaurantiaca), which is found only in Formosa, resembles the Himalayan species (H. nipalensis) more than the Chinese (H. moschata). Swinhoe's goat antelope (Nemorhoedus) has its nearest relatives in Sumatra and Japan. The Formosan deer, also called after its discoverer Swinhoe, most closely resembles the Schka deer

of Japan, called Cervus Sika by the zoologists, while the island's wild pig also resembles the Japanese one. The pretty little Formosan flying squirrel (Sciuropterus haleensis) also points to a Nepalese relationship, and the island ape, (Macacus cyclopsis) which is not unlike the orang-outang, and after which is named the steep coral cliff at the entrance to the bay of Ta-kaô harbor, is closer to the Indian M. rhesus than the M. sancti Johannis of South China. There are said to be no parrots on the island.

6: Kirchhoff--29 U-4 (no date) 1895 Formosans
116, 133, 136

After all this [MC: evidence of the similarity between the fauna of Formosa and the mainland] one will probably agree with Wallace's final conclusion that while Formosa is an island detached from China, this separation from the mainland must have occurred pretty early, though certainly during the Tertiary period. Further, not only did many species of animal on the island vary, the insular isolation preventing cross-fertilization with unaltered species, these varieties gradually becoming new species, but at the same time great changes were experienced in South China with respect to fauna, so that the relations to the Indian domain were more and more obliterated. It would be of value to subject this explanation to a more searching test, by means ,for example, of paleontological discoveries in the soil of southern China. The beetles and butterflies of For - mosa also diverge from those of the Chinese mainland, while they are related to and in part identical with those of Hainan and the Malayan island region; but these creatures might have been transferred by the typhoons that frequently blow over the island from a southerly direction (Hosie, p. 6).

6: Kirchhoff--29 [2] U-4 (no date) 1895 Formosans
116, 174

Formosa, whose northern heights can be seen on clear days from the Fu-kien coast, did not remain unknown to the Chinese throughout the Middle Ages. They then called the island Liu-kiu or Great Liu-kiu (Ta-liu-kiu). According to the Chinese Annals, it first became known in 605 A. D. They found there a strange people whose language they did not understand; one year later an expedition set out from China for the island, at the order of the Emperor, but the islanders defended themselves valiantly, and the only thing achieved was a campaign of destruction and the taking of a few thousand prisoners.

6: Kirchhoff--29 [3] U-4 (no date) 1895 Formosan Aborigines
116, 144, 171, 511

There can be no doubt that these Formosan natives belong to the Malayan race. Proof of this is offered by their language, their physique and many of their customs, such as headhunting and the community houses in the villages, where the youths and unmarried men sleep together.* Separated into many tribes divided by dialect and varying in

* Joest, "Beiträge zur Kenntnis des Eingebornen der Insel Formosa," Verhandlungen der Berliner Gesellschaft für Anthropologie, 1882, p. 61.

appearance, these Formosan Malays do not possess any common name. Today, insofar as they live untouched by the culture of foreign intruders, they lead a pretty rough existence, generally as hunters, although they live in small forest villages made up of wretched bamboo huts.

6: Kirchhoff --29 [4] U-4 (no date) 1895 Formosans
116, 175

In the course of the centuries, Formosa had quietly received settlers from the neighboring coasts of South China for pirates or anyone else who had had a rift with the Chinese Government, the island offered a place of refuge similar to that offered by Iceland and Greenland to the old Norwegians; but besides that, the amazing fertility of the island must have proved attractive to the inhabitants of the scanty and rocky soil of Fukien. But even after 1564, when an Imperial fleet, occupied in pursuing a bold pirate, had occupied the Pescadores, for which a Chinese Governor was thereupon appointed, Formosa remained untouched by any fresh attempts on the part of the Chinese Government to extend its power.

6: Kirchhoff--29-30 U-4 (no date) 1895 Formosans
116, 175

The 17th century brought the decisive turning point. After a Japanese attempt to colonize the Formosan coast (1620) had disappeared without a trace, the Dutch, who had become acquainted with the island on their journeys from Batavia to Japan, [30] established themselves on it. Their East Indian Company first took possession, in 1624, of the island in the sea where An-ping is now found, and there they built their fort of Zelandia. They soon established themselves in the southwest of Formosa also, and once again (1642) forced out the Spanish rival, who had set up the fort of San Salvador on the bay of Ki-lung in 1626. The Company now set up permanent establishments in the north of Formosa, at both Ki-lung and Tam-sui. The Dutch established satisfactory relations with the brown-skinned natives; every village chieftain within the area they controlled (this did not extend far inland, and never touched the east coast) was given, as a mark of the office he exercised in their name, a staff with a silver mounting on which the arms of the Company were engraved; thousands were won over to Christianity by the Dutch preachers, and in the village schools Dutch teachers taught the reading and writing of Dutch. But the Chinese settlers, on the other hand, were far from pleased by the demands of the "red-headed," as they called the Dutch, least of all by the poll tax laid on each of them from the seventh year on. At this very time thousands of refugees came over from South China (the figure of 25,000 is given for the period between 1624 and 1644); for the Manchus had broken through the Great Wall and had dethroned the Ming dynasty, an act that was followed by civil war lasting for decades.

6: Kirchhoff--30 U-4 (no date) 1895 Formosans
116, 175

The Dutch commercial company in the meantime busied itself with a profitable smuggling trade from Formosa to China. Their badly paid officials took an active part in this, for their own personal gain, making a clear profit of 100%. Raw silk was shipped to Japan, and silken materials via Batavia to the Netherlands. The average money value of this secret trade with China amounted to 4 million marks a year. And the colonial administration of Formosa did not cost the Dutch more than 357,000 marks a year, and brought in 142,000 marks in revenue. Admittedly, however, owing to the commercial economy practised in Batavia (not until 1660 did one proceed to raise the garrison of Zelandia to 1,500 men), the Dutch were in no position to withstand a serious attack from outside. And this was undertaken in 1662. The powerful opponent of the Manchu dynasty, whom we usually refer to by the Portuguese version of his name, Koschinga, saw the collapse of his ambitious plans in China, whose coasts he had threatened with a fleet of more than 3,000 junks. So now he hurled himself on Formosa, where he was naturally received with open arms by the Chinese population. After a valiant resistance, the fort of Zelandia fell on February 1, and with this there was an end to Dutch rule in Formosa.

Koschinga enjoyed this final triumph of his agitated life for but a few months. He died on July 1662. Several scions of his race successively wore the crown of Formosa, until in 1683 the Manchus seized both the Pung-hu Islands and Formosa, making them into a governmental district (a Fu) of the province of Fu-kien.

6: Kirchhoff-30 [2] U-4 (no date) 1895 Formosans
116, 175

. For the last twenty years the assertion, constantly repeated among us, that China laid claim to the western part only of Formosa has been false. That changed, after the danger of a Japanese seizure of the east coast became a reality. The Butang, the Formosan natives living in the southeast of the island, had plundered Japanese ships forced ashore, and in 1873 a Japanese mission was despatched to Peking to ask for satisfaction. The reply of the Tsung-li-jamen that the Chinese Government did not feel itself responsible for misdeeds committed by savages it had not subjected obviously suited the cabinet in Tokyo. Under the pretext of punishing the Butang, a well equipped Japanese expedition put out to sea in March, 1874, landed on Formosa's Southeast coast and set up an encampment there. The Butang tribes soon submitted to the Japanese; but in China this turn of events attracted much attention, a sign of the importance the Chinese attached to Formosa. The hasty purchase of weapons and the speedy shipping of Chinese troops numbering between 8,000 and 10,000 to Formosa seemed to be the prelude to an armed clash. But this did not occur; repeated lengthy diplomatic negotiations in Peking, conducted by the Japanese with pride and energy, led in the Autumn of 1874 to Japan's expressing itself satisfied with a considerable financial indemnity and recognizing China's sovereign rights over all Formosa.

6: Kirchhoff--30-31 U-4 (no date) 1895 Formosans
116, 161, 177.63 China
636.63

The whole of Formosa, belongs only to the Chinese "sphere of interest," together with the islands off its coast. In reality only the western side is ruled by the Chinese, the north and, recently, a narrow strip of land along the eastern coast. Within this ruled region the Chinese Government is said to have carried out a census of the inhabitants, but [31] to have treated the results as an official secret. The assertion, made for a long time past, that Formosa has 3 million inhabitants, has thus practically no basis whatever. If this estimate were correct, it would enable one to conclude that the density of population attained the not inconsiderable figure of 90.

6: Kirchhoff--31 U-4 (no date) 1895 Formosans
116, 144, 162, 563

Already, there can be no doubt, the Chinese constitute the larger part of the population, for since the 17th century ever new droves have immigrated from Fu-kien and Kung-tung, and these have greatly increased, owing to the early marriages and the large numbers of children. The vigorous and enterprising tribe of the Hakka, from the latter province, has preserved its individuality on Formosan soil; its members are distinguished by their fine ironwork, and provide the natives with their knife blades and long flints. In North Formosa the Chinese settlers' wide open, sparkling black eyes attract attention, in contrast with the narrow slit eyes of the Chinese which are here quite general, otherwise; this is the result of unions of Chinese immigrants with native Malay women.

An important third element must still be mentioned. This is the Pepo-huan (also called Sek-huan or Schek-huan, i. e. "half savages"). The Pepo-huan are those Formosan Malays who accepted the fate of dependence on the Chinese intruders and gradually became Chinese in customs and outlook, without there being any mixture of blood. Yet they are distinguished physically as well as culturally from free natives living in the mountains (probably as the least numerous of the three elements making up the population of Formosa), the Tsche-huan or Tschin-huan, i. e. "complete savages," as they are called by the Chinese, who greatly fear their passion for hunting Chinese heads.

6: Kirchhoff--31 [2] U-4 (no date) 1895 Formosan Aborigines
116, 105, 177 Pepo-hoan

The Pepo-huan are big, bronze-colored men with shining eyes and bold looks who, like their women, of delicate build and a lighter skin color, have taken over much in clothing and dwellings from the Chinese, and who use the Chinese language, at least when dealing with the Chinese, although among themselves they usually talk their own Malayan dialect. Those of them living along the coast are fishermen; their women prepare salt from the sea water which they let run through sand and evaporate. The Pepo-huan of the interior are still fond of hunting, their hereditary occupation, but for the most part they are peasants. As though in imitation of the Dutch, the Chinese allow the peasants of each Pepo-huan village subject to them to choose a chief to settle quarrels among themselves, and appeal may be made from his decisions to the Chinese administration of the district. At his side the Chinese "interpreter" acts in the main as gatherer of the taxes imposed by the Imperial Government. The Pepo-huan are still distinguished by their bravery, dependability and hospitality, but they have been sadly reduced, economically, by the sly Chinese.

6: Kirchhoff--31 [3] U-4 (no date) 1895 Formosan Aborigines
116, 177, 426

The Chinaman misuses the unsuspecting nature of the brown "half savage," lends him money the latter needs in order to buy a wife, a cow or a shotgun, or to drink Samschu (rice brandy) or smoke opium. Thus he turns him into his debtor, who unsuspectingly pledges his house and possessions, until finally the Chinaman has him as his wretchedly poor tenant.

6: Kirchhoff--31 [4] U-4 (no date) 1895 Formosan Aborigines
116, 609, 721, 177.72 China
636.72

At times the Chinese do not fear, even today, to use open force, if it is a matter of forcing the Pepo-huan off better soil. This was done with the natives inhabiting the north of the island, who are called Kabaran. They finally withdrew to the other side of the mountains, to the fruitful plain of Komalan (more popularly, Kapsulan), which stretches out on the eastern coast of North Formosa as far as Su-aô; there 4,000 of them are said to live in flourishing settlements and to extend even farther south along the coast as far as Hua-lien. Unfortunately they are constantly at odds with each other, so that there can be no question of a united opposition against the Chinese. Nor can they take flight into the neighboring mountains on the west; for there they would be met by the free Tsche-huan, who hate them as renegades.

6: Kirchhoff--31 [5] U-4 (no date) 1895 Formosan Aborigines
116, 101, 563, 177.72 China
636.72

The geographical distribution of Chinese, Pepo-huan and Tsche-huan is not so simple as often described: in the plain, the hilly country and the mountains, respectively. The only thing right about this is the fact that the free savages live alone in the mountains, protected by the forests. The Chinese push on step by step even into the mountains of the interior and fell the forests.

6: Kirchhoff--31 [6] U-4 (no date) 1895 Formosan Aborigines
117, 101, 177 Pepo-hoan

We hear tell of a Chinese farm on the island in the Dragon Lake, and of the apparently near-by plain of Polesia, surrounded by mountains, that is said to be inhabited entirely by Pepo-huan who not only speak Chinese, but who have completely forgotten their own tongue (Imbault-Huart, p. 286).

6: Kirchhoff--31-32 U-4 (no date) 1895 Formosans
116, 241, 262

Up to the present only a modest portion of Formosa is cultivated, for the most part this being the coastal regions of the northeast and the western plain; from there only small cultivated strips [32] stretch out towards the east. The chief cereal is rice, which provides two and in some places three harvests a year. The careful cultivation of rice, like the use of the water buffalo, was naturally introduced by the Chinese. The rice fields are laid out on artificial terraces made in the lowest slopes above the valleys, and they are kept under water by means of skillfully constructed canals so that these areas, after the young plants from the seed beds have been laboriously planted, resemble great pools of mud traversed only by narrow paths. But just before the harvest they look like juicy green carpets. The first rice harvest, for which the seedlings are grown in March and transplanted to the fields in April, becomes ripe at the end of June or the beginning of July, the second (on the same fields) at the conclusion of October. The next most important crop in the people's diet is the sweet potato; two harvests are obtained from this also, at about the same time as the rice harvests. Wheat and barley are seldom planted, and always as a winter crop only.

After rice and sweet potatoes, sugar-cane and the tea plant are most frequently planted. The growing of sugar-cane extends over the whole western side of the island; it is found in enormous quantities in the surroundings of Ta-kaô and Tai-nan, but also upstream from Tam-sui, particularly on the flooded ground on either side of the Sintiam River, where the stalks attain the height of two men.

6: Kirchhoff-32 U-4 (no date) 1895 Formosans
116, 245

The tea plant appears to be cultivated only in North Formosa, to the 24th parallel. But there, in the course of the last decades, it has extended over enormous areas of hilly land, as on the heights round Tua-tu-tia and to the east of Bang-ka. When a fresh piece of forest land has been won from the original inhabitants, it is at once cleared; the tree stumps are taken out, the fallen trees are burnt and bushes cleared away in great bonfires, and then indigo is sown for a short while. Finally a tea plantation is laid out, either by sowing seed or by the use of shoots. May not the heavy rainfall, divided into the two rainy seasons that may be presumed to extend beyond Ki-lung, be the chief reason for the marked success enjoyed in the cultivation of tea in northeastern Formosa? The tea is very strong and aromatic. Without any manuring of the soil, the tea leaves are picked three times a year (in some districts as many as seven times). In addition to the heavy rains, especially in the winter, the early fogs that are the regular thing at this time in the mountainous regions favor the exceptional development of the leaves. On the other hand, attempts to grow tea in the southwest (around Tainan)have failed.

6: Kirchhoff--32 [2] U-4 (no date) 1895 Formosans
116, 137, 241

As well as indigo, there are grown ginger and plants providing oil, both sesame and peanuts (Arachis hypogaea), and also melons, pineapple, bananas and the South Asiatic tree fruits such as mango and the giant lemons or grapefruit (Citrus decumanus). The Chinese nettle (Su-mo in Chinese) need not be planted any more than the Fatsia papyrifera, since it grows wild in abundance, the latter especially on the mountains round Tam-sui.

6: Kirchhoff--32 [3] U-4 (no date) 1895 Formosans
116, 228, 262

Many thousands make their living along the western coasts by sea fishing and the apparently even more profitable cultivation of oysters, in part as "rock oysters" on stones and in part as "bamboo oysters" in planted areas of bamboo cane. The yearly return from this oyster cultivation is said to amount to 116,000 marks and nevertheless to be insufficient for the more wealthy Chinese who dote on them, so that large quantities of dried oysters from the mainland are imported also.

6: Kirchhoff--32 [4] U-4 (no date) 1895 Formosan Aborigines
116, 177, 286, 322, 412 Pepo-hoan

In respect to crafts also, the Chinese have stamped their individuality on the Pepo-huan. But the Pepo-huan continue to manufacture their wooden vessels in the traditional way, and the knife handles also, in which they insert the blades they buy from the Hakka. Their wives manufacture coarse materials from pineapple and nettle fibers.

6: Kirchhoff--32 [5] U-4 (no date) 1895 Formosans
116, 248, 286

This latter fiber [MC: nettle fiber] promises to become even more valuable when it proves possible to free it of the gummy substance that clings to it, makes it more difficult to use and prevents it from taking color evenly when, for example, it is woven together with silk. But even so the Boehmeria ("la ramie" of the French) provides a highly esteemed woven material that gleams like silk, so that it is grown in huge quantities in Ho-nan, Schan-tung, Hu-pe and round Nan-king. In Formosa the stalks reach a height of 3 to 4 m., and can be cut three times a year. In part the stalks are treated as follows: after they have been softened by soaking in water, the bark has been removed and they have been smoothed and dried, they are sent as raw material to China, where they are used to manufacture Schia-pu (summer material, the "grass cloth" of the English); in part the Chinese women and the wives of the Pepo-huan, in Formosa, spin the beautiful fibers to form a shining yarn, and from this they weave broad strips of material up to 30 m. long and 45 cm. wide, two women sitting at a primitive loom out in the open. Boehmeria fiber is already exported from Shanghai, in large amounts, for the world trade, and in London as much as 2,000 marks is paid for the ton.

6: Kirchhoff--33 U-4 (no date) 1895 Formosans
116, 249

The manufacture of sugar and the preparation of tea are altogether in Chinese hands. The first in particular represents considerable values, although the wares are of poor quality only, about half the raw juice remaining unused in the waste owing to the insufficient pressure (it is done between two stone cylinders turned by buffalo or oxen).

6: Kirchhoff--33 [2] U-4 (no date) 1895 Formosans
116, 244

The fine thin oil of the peanut is used for household purposes only where it is obtained; but what is left after extraction of the oil is sold in large quantities in Amoy and Futschau as food for cattle, in the form of cakes, or as a fertilizer.

6: Kirchhoff--33 [3] U-4 (no date) 1895 Formosans
116, 249

The indigo, which is grown for the most part in North Formosa, yields a dye by dissolving, and is exported in this state, but it is also used in Formosa as the source of a very fast dye for materials.

6: Kirchhoff--33 [4] U-4 (no date) 1895 Formosans
116, 314, 563

Camphor is obtained in a curious way. It is the result of a never ceasing guerrilla warfare on the forest border, where the region inhabited by the Tsche-huan begins. Risking his head in the process, the Chinese frontiersman either sets out at random with his axe into the woods or he deceives the unsuspecting savage, after having intoxicated him with Sam-schu, by swindling out of him a certificate or authorization to fell wood in his district. The greater part of the camphor tree is then used as a building wood and the rest is hacked up into chips, from which commercial camphor is obtained by moist distillation.

6: Kirchhoff--33 [5] U-4 (no date) 1895 Formosans
116, 135, 317

Among the minerals, there should first be mentioned the sulphur of North Formosa. The sulphur is broken into blocks or it is cut out of sulphurous earth by melting.

Petroleum is obtained in various spots, but is inferior. According to old Dutch chroniclers, gold was formerly mined in the northeast; it is also said that, in the trenches dug to receive it, quantities of gold were obtained at the foot of the hills in this region, when the August rains had swelled the rivers. The river of Su-aô actually carries down from the mountains particles of gold in the sand. Other regions of the island have also proved to contain gold recently. Thus, in the southern part of the country, near Liang-tschian (within the territory still left to the natives), a landslide caused by heavy rains is said to have revealed a considerable quantity of gold. Most surprising was the discovery of goldbearing river sand while building a railroad bridge over a tributary of the upper Ki-lung, in 1890. At once thousands of Chinese hastened thither who had learnt goldwashing in California or Australia; and in the course of the last years the stones carried down by the Ki-lung have been most industriously exploited by these goldwashers, and it would appear with considerable success. But in the fixed rock no gold has been discovered there (Hosie, pp. 23 ff.).

But much greater profit is promised by the extraction of coal, which is met with far and wide in extensive beds, both in north and south (Hosie, p. 21). Up till now the only extraction of importance has taken place in the beds that can be traced along the northeast coast, on the right side of the Ki-lung River, through the Ki-lung Mountains as far as the mountain spurs of Pi-taô. The coal mines there lie close to the coast near

the port of Ki-lung, and provide, in part, a very good anthracite; formerly the coal was extracted only in Chinese fashion in galleries that sank diagonally, but since 1875 machines have been used.

6: Kirchhoff--33 [7] U-4 (no date) 1895 Formosans
116, 439, 489

When four ports were thrown open in 1860 to foreign commerce (Tam-sui and Ki-lung in the northeast, Tai-nan and Ta-kaô in the southwest), in Europe excessive hopes were set on the commercial profits to be obtained from the natural wealth of the island. Nothing was known of the lack of communications in the interior, the utter absence of the canals which, in China, did so much to render easier the transport of goods, or of the poverty of the inhabitants. The sum at the disposal per day of the poor Chinese peasant for himself and his numerous family (the Chinese price of essentials being very low) is but 20 pfennigs! But since then many advances have been made in Formosa, and at least in some stretches the absence of roads has been made good. How much that has fostered commerce can be seen from the increase of total imports and exports for the two most important of these treaty ports. In the 15 years from 1868 to 1883, these figures rose from 7 to 18 million for Ta-kaô, and for Tam-sui from 5.6 million to 20 million.

6: Kirchhoff--33-34 U-4 (no date) 1895 Formosans
116, 252, 439

The main imports from lands other than China are cotton and woolen materials, and Indian opium; then follow metal goods, clocks, maize flour (used by Chinese settlers in baking cakes), boards, lamps, matches, dye for dyeing, umbrellas, needles and related articles. Even more variegated is the list of imports from China, embracing hemp sacks, peas, bricks and fans, jade bracelets, etc., but the value of this commerce which involves for the most part the ports of Amoy, Tsuan-tschau (Tschang-tschou on our maps) and Fu-tschau cannot be estimated. *

*The Europeans acting as customs officials in the treaty ports [34] note only the value of the goods imported from abroad and exported abroad, because they have to collect taxes for the Chinese Government from them alone. Consequently it is obvious that the value of goods from China and exported to China is not included in the sums quoted for Ta-kaô and Tam-sui.

6: Kirchhoff--34 U-4 (no date) 1895 Formosans
116, 439

The bulk of Formosan exports consists of sugar, coal from Ki-lung, tea, camphor, nettle fiber, indigo and wood for construction. Sugar constitutes roughly half of the total exports, indeed almost the total exports of the southwestern harbors, where the only other exports concerned, practically speaking, are sesame and turmeric root (for the manufacture of saffron yellow). The inferior brown kinds of Formosan sugar go to Japan and China, the white sugar is exported to Europe also.

6: Kirchhoff--34 [2] U-4 (no date) 1895 Formosans
116, 372, 439

The coal from Ki-lung might bring in tremendous sums, in view of the steadily growing demand for coal in the South Seas steamer traffic, which at present must be met by coal coming from such distant parts. And, in fact, in Hongkong for example Formosan coal can be delivered at a price per ton of 20.2 marks, so that it is at times cheaper than Japanese and Australian coal, and almost only half the price of English coal. But unfortunately this coal is too bituminous, and therefore burns too quickly, emits a great deal of smoke and deposits much soot in the chimneys. So the Chinese of the mainland prefer their own anthracite, while the foreigners in the Chinese coastal regions are quite willing to burn Formosan coal in stoves in the rooms. In view of the cheapness of the latter, its future seems assured, particularly when it is mixed with slower burning coal that is free of bitumen.

6: Kirchhoff--34 [3] U-4 (no date) 1895 Formosans
116, 501, 505

Although recently steamers have greatly limited the use of junks in Formosan commerce also, nevertheless the junks are able to maintain themselves against this superior competition for two reasons: the keelless junks of shallow draught are more easily able to enter and to leave the shallow harbors of Formosa, while on the other hand, in view of their smaller crews and the smaller cargo required, they can wait to load in the harbor without great expense. When the wind is favorable, the junks can cover the distance between Formosa and Fo-kiën or Ning-po in a surprisingly short time. The little junks of between 10 and 25 tons are also able to travel over very shallow regions of the coastal waters, and suspend service only in the most stormy winter periods. They are absolutely indispensable for transporting goods from the various coastal regions and from the interior of the island, by water, to the four large treaty ports.

6: Kirchhoff--34 [4] U-4 (no date) 1895 Formosans
116, 439

It must still be stressed that China and Japan naturally occupy first place in the export trade with Formosa, because of their proximity and huge populations, but that the European flags most often seen are the English and the German. Formosan tea is sent almost exclusively to North America, and the camphor is sent via Hongkong to Europe (the yearly value often amounts to 600,000 marks).

6: Kirchhoff--34 [5] U-4 (no date) 1895 Formosans-1-2
116, 133, 311, 361

The more important localities in Formosa all arose as centers of the export trade, and are thus either harbors or at least are situated close to the coast.

The most remarkable degree of development has been attained by Tai-nan, formerly known as Tai-uan or Tai-uan-fu. It now lies more than 3 km. distant from the coast and away from the right bank of the Na-mu-ki. But as late as the 17th century the wide plain between the town and the sea, which is now traversed by creeks and in which there are many fishponds, was a stretch of the sea, and today it is still flooded every year by the southwest monsoon. At the place where nowadays the creek flowing westwards from the town widens out to form a broader stream, more resembling a river, there lies the rather higher ground that bears the village of An-ping, 2 1/2 km. from the town and close to the shore of this creek, which continues on in a southwesterly direction for another kilometer, offering anchorage to junks of shallow draught and finally joining the sea after traversing a shifting sandbank. This hilly ground on which is An-ping measures 1 km. from east to west and 1/2 km. from north to south; it still rises like an island amidst river arms and swampy plains, and is the already mentioned former coastal island of Tai-uan, its name then being given by the Chinese to the whole island of Formosa. At that time, when from 1630 to 1633, the Dutch built their fort of Zelandia, the longitudinal axis of the sandy islet (it was narrower also in those days) ran from southeast to northwest, forming the partial barrier against the open sea of a lagoon bay cutting more deeply into the body of the main island; in the north the entry

to the lagoon was always open, via a broader channel of the sea, and in the south a sandbank one could walk on at low tide already began to connect the isle to the main island.

6: Kirchhoff--35 U-4 (no date) 1895 Formosans
116, 133, 175, 361

On the eastern side of the lagoon of Tai-uan lay the small locality of Sakkam (in Chinese: Tsche-kan), a native village of about 100 houses. In front of this the Dutch erected another fort, called Provintia or Providentia, exactly opposite Fort Zelandia, so that the lagoon was dominated on either side. After the collapse of Dutch power in Formosa, Zelandia still remained the key to the entry of the lagoon, behind which little Sakkam had grown to be the most important trading center on the island. For this reason Koschinga made it his residence and the Chinese, when they took possession in 1683, made it the seat of government and consequently called it Tai-uan-fu. But the continued growth of sandbanks that gradually rose above sea level, to the west of Fort Zelandia, made this fort useless as a coastal protection, so that it was dismantled in 1874 and a new fort built of its materials 1 1/2 km. to the south, close to the present coastline. Fort Provintia, in which the consul Swinhoe saw the Chinese temple in 1863, and which was built as a protection against the maleficent influences of the wandering spirits of the hung maô ("redhaired," the Dutch), has also been demolished since that time. It had long before been absorbed in the big irregular rectangle of Tai-uan-fu.•

6: Kirchhoff--35 [2] U-4 (no date) 1895 Formosans 116, 361

This rectangle, [MC: i.e., Tai-uan-fu] like that of Peking, is roughly orientated with respect to the points of the compass, and is surrounded by a crenellated wall covered with slate about 9 km. in length, and pierced by eight gateways surmounted by rectangular towers. The town is built in Chinese style. The main streets cut each other at right-angles; most of the houses are built of bamboo or clay, only a few of brick. The roofs of the houses, which are without exception low, are of straw or slate, and cannot be seen for the seven or eight months of the worst heat, for they are then covered by the huge sheets of canvas that are stretched over the streets. In front of the western gate there is a suburb with narrow, dirty streets, and this is the business quarter. But the few foreign traders do not live here, they live in An-ping, and have their warehouses there; there the climate, in view of the marshy surroundings, is admittedly unhealthy, but the junks, as we have seen, anchor close at hand. Tai-uan-fu itself has long since ceased to be mainly a commercial town or even a harbor, it is the tranquil site of the administration and of the agency conducting the great state examinations for officials. Large areas within the town wall are occupied by cultivated fields, flower gardens and public squares planted with fine old trees, so that the German traveler Joest, who estimated at 200,000 the population of Tai-uan-fu (for a little while now called Tai-nan), is probably further away from the truth than the usual figure of 70,000. The population is even said to be declining sharply, since the constant sanding up of the entry near An-ping make things ever more difficult for the passage of junks.

It is therefore [MC: in view of the decline of Tai-uan-fu as a commercial city] natural that the greater part of the export trade of South Formosa should have gone over to Ta-kaô, 40 km. farther south, which has been connected telegraphically with Tai-nan since 1874. This small but important port is reached by passing between two precipitous cliffs that can easily be seen from far out at sea; on the left rises the Ape Mountain (of coral limestone) to a height of 400 m., and on the right there rises even more precipitously a cliff 120 m. high, called the Saracen's Head after the English cannonboat that surveyed the west coast of Formosa some decades ago. Between these two heights, which are occupied by forts, even smaller steamers can enter a bay which, however, is of very limited extent, and which is surrounded on either side by the installations recently constructed by the Europeans: immediately behing the fort at the foot of the Ape Mountain is the quay alongside which ships lay to, the customs, the English consulate and the dwellings of the foreign traders, while opposite (that is, behind the Saracen's Head) can be seen the hospital of the Presbyterian mission station, transferred from Tai-nan to Ta-kaô, the hospital doing a great deal of good, and the European warehouse. The very shallow lagoon, which stretches out from this harbor to the southeast, parallel to the coast, is separated from the sea by a sandy tongue of land (which first attached the Saracen's Head to the mainland). On this tongue of land is a fishing village with between 1,500 and 2,000 inhabitants, and called Ta-kaô after the harbor. Beyong the lagoon the glance passes over stocks of bamboo, palm and mimosa in the

foreground, and then over an intensively cultivated plain with small villages peeping from amidst the green sugar-cane fields, finally reaching the hazy blue mountains. In this coastal plain, which stretches out farther than the eye can see to the southeast, there lies the town of Fung-schan and, beyond the mouth of the Tan-tschui-ki, Pang-leaô, the center for the junk traffic of this southern region. When the southwest wind develops its full force, no vessel can lie to on this coast, which is most immediately exposed to this wind. The most southerly town on Formosa, which was founded quite recently, is Heng-tschun, the capital of the southern region of the same name, distinguished for its huge rice harvests. It lies at the foot of the western chain of the southern tongue of land.

6: Kirchhoff--35-36 U-4 (no date) 1895 Formosans
116, 133, 361

Rather farther inland is the group of towns of the North Formosan Tam-sui River region. The harbor [36] of Tam-sui consists only of the mouth of this river. The entry into the harbor over the constantly shifting sandbank, because of the strong surf this causes, is free of danger for steamers only in calm weather and when the tide is high. The channel of the river, which flows in a northwesterly direction at its mouth, is deeper on the right-hand side, while the bed is exposed at low tide on the left-hand side, for far more than half the width of the bed. Consequently all settlements are found on the right bank. Once the bar has been crossed there can first be seen, on the left, the Chinese fort, and then the former Dutch fort, built of red brick, where the English consul now lives, and after this the customs house and the open ground of Huuëi or Ho-be, which only the foreigners call Tam-sui after the river. Busy as the port may be, the spot really consists only of a narrow street along the stream in which only two people can avoid each other. But it is adorned by a Chinese temple born on stone columns and is well situated. Close to the locality there rise amphitheater-like the slopes used as a burial ground. Behind this the sides of the Ta-tun bears peanut and sweet potato fields on the lower parts, among which are strewn Chinese farmhouses, and from a height of 500 to 600 m. forests consisting of bamboo and tree ferns.

6: Kirchhoff-- 36 U 4 (no date) 1895 Formosans
116, 361, 505

Upstream [VMM: from Tansui] on the right bank also, there follows the populous town of Tua-tu-tia, the chief center for the preparation and export of tea, and farther along Mang-ka or Bang-ka, important because of the fact that larger junks come up this far on the Tam-sui (which should really be called the Sintiam at Bang-ka); this explains the dense crowds in the terribly filthy streets of Bang-ka, where humans and pigs fight for room. In particular, the small vessels bring down camphor from the mountain streams to be reshipped here.

6: Kirchhoff--36 [2] U-4 (no date) 1895 Formosans
116, 133, 361

Bang-ka ceased to be a seat of administration since the foundation, in 1879, of Tai-pe (or Ko-ping) as the center of administration in North Formosa, in the densely cultivated plain between Bang-ka and Tua-tu-tia, and at almost equal distances from the two towns. The whole fruitful but marshy plain of the three towns has only unhealthy, brackish water, but it receives good water from the southeast from the mountains behind the village of Kieng-be, through an artificial connection that was laid down quite a long time ago.

Beyond this fertile plain there soon begins the still little known land of the "wild savages," the Tsche-huan. Here Sintiam and Tokoham are the most advanced posts of civilization. The two sources of the Tam-sui called after these towns rise in the wooded mountain regions not yet subject to China, but finally flow through rice, sugar-cane and sugar fields... The Tokoham River in particular forms a sharp line of cultural demarcation: to its left are vivid green tea plantations and rice fields along all the heights as far as the sea, and on the right stretches out dark primeval forest.

6: Kirchhoff--36 [3] U-4 (no date) 1895 Formosans
116, 133, 491, 493, 501

A much used road leads from Tam-sui to the most important port of Ki-lung. Although it is hardly half the distance as the crow flies, one travels 52 km. up the winding Ki-lung River on the flat-bottomed boats mentioned above (as in the Philippines the natives call them banka) manned by two rowers who are helped by a third for the stretch with rapids. A number of small localities border the river, whose lower course is so shallow that the rising of the tide in it can be distinctly seen. But then follows a series of rapids in the mountainous region. Tr[illegible] by boat ceases where the river comes to within 5 km. of Ki-lung Port; one transfe[illegible] to the sedan-chair used in Formosa, where there are no carriages, and via a pass 200 m. high one goes down the steep mountainside facing the sea to the ... bay with its coal-bearing surroundings. Here, by way of exception, the entry into this natural harbor is without danger even for ships of greater draught, in spite of its being hemmed in by coral reefs, and the protection against storms in this bay amidst mountains is almost complete on all sides. Nevertheless no steamer can reach the town of Ki-lung, for the shore in front of this locality, which is situated at the back of the bay, is extremely soft, forming a morass at low tide traversed only by a narrow channel leading from the anchoring place. This softening is steadily increasing, for here as in the other Formosan ports the Chinese Government is doing nothing to prevent the junks' evil practise of dumping their ballast right in the anchorage.

6: Kirchhoff--36 [4] U-4 (no date) 1895 Formosans
116, 361

Ki-lung is a locality of but 1,000 to 2,000 inhabitants; it owes its importance almost exclusively to the export of coal from the mines that lie a bare 1 1 /2 km. to the east-southeast; camphor and indigo play quite a subordinate part in its export trade.

6: Kirchhoff--36-37 U-4 (no date) 1895 Formosans
116, 311, 361, 487

To the northwest of Ki-lung the coastal village of Kimpaôli is of some significance because of the neighborhood of the solfataras of the Ta-tun Range. A road runs in a southwesterly direction from Kimpaôli and joins the so-called military road beginning opposite the harbor of Tam-sui, at the village of Pa-li-hun, and leading to Tai-nan and even farther along the coast to the southern point of the island.

In North Formosa the open place of Tiong-lek is situated on it, with heavy plantings of [37] rice, sweet potatoes, and turnips, and also the walled town of Teuk-tscham (now officially known as Sin-tschu). This is an important commercial center connected by water the nearby coast. Wide rice fields and luxuriant tea plantations surround it, but unfortunately it is not available for foreign trade, although an excellent market would be found here for materials and opium. Now loads of camphor are transported from here on the backs of bearers to Tam-sui, the nearest treaty port.

6: Kirchhoff--37 U-4 (no date) 1895 Formosans
116, 487, 493

The "military road" goes on from Shinchiku in a wide curve via the inland towns of Tschang-hua and Kia-y; in a sedan-chair the 300 km. separating Tam-sui and Tai-nan can be covered in 10 days, but it is hardly anything more than the linking of the ordinary field paths, on which the terribly creaky ox-carts bear home the rice harvest on their spokeless wheels, the fixed axle turning round also. There are no bridges at river crossings. In the rainy season this route cannot be used, for most of the stretches of road making it up turn into ditches of brackish water.

6: Kirchhoff--37 [2] U-4 (no date) 1895 Formosans
116, 175, 311, 361

Chinese settlement on the east coast is quite new, and so are the roads laid down on this coast and to the coast. Since the beginning of the 19th century Chinese settlers, for the most part people who had to expect punishment for some offense if they stopped longer in the region controlled by the Chinese Government, went round the northeast point of Formosa to the coastal plain of Kapsulan, now officially called Komalan. This plain is at most 10 to 12 km. broad. The fertility of this plain for crops of rice was soon recognized; so settlers came also who had not taken to flight, and here too, although in a hard struggle with the natives, Chinese villages gradually grew up, as far as the bay of Su-aô in the south. The favorable position of the little village of Su-aô (i.e., Su Bay), on this fine bay, was first recognized during the Japanese expedition of 1874, when it became the headquarters of the commander of the Chinese observation corps. Today Su-aô is a thriving town at the mouth of the river of the same name, whose valley forms a route for several kilometers to the southwest, towards the foot of the coastal range; all around are green rice fields, and the tea plant does well on the cleared forest soil of the surrounding heights.

6: Kirchhoff--37 [3] U-4 (no date) 1895 Formosans
116, 205, 487

A stretch of "military road" was at once built between Su-aô and the mouth of the Hualien, although malaria mowed down large numbers of the workmen. With this the arm of the Chinese Government, which had at once set up a postal service in this stretch, had already extended itself from the north to about the middle of the east coast. All that remained to be done was to establish contact with the east coast in the narrower southern part of the island. In the southern third of the east coast there lay the isolated coastal locality of Pi-lam. A route was laid down crossing the mountains and ending there. It begins 36 km. to the northeast of Ta-kaô on the Tsche-schan (i. e., at the Red Mountain), but it is very narrow and often uses the beds of streams, which naturally are more or less passable only in the dry season. Yet in the critical year of 1874 it proved very useful, when it was necessary to hold in check the native tribes during the Japanese invasion; for the route cuts through a number of the footpaths used by the natives.

6: Kirchhoff--37 [4] U-4 (no date) 1895 Formosans
116, 175, 563

So, at this time, the coasts of Formosa are practically in Chinese hands. About 2/3 of the whole island has become subject to China, and the fate of the native Tschehuan [MC: savage] appears to be sealed. Either their freedom disappears, for with their unceasing feuds, they are unable to protect it or like the proud camphor trees of their native woods they themselves fall beneath the murderous blows of the Chinese, who press them ever closer.

6: Kirchhoff--37 [5] U-4 (no date) 1895 Formosans
116, 177.65 China
636.65

Originally the colonizing zeal of the Hakkas and the people of Fokien had quite independently won the soil of the island step by step. Then the rule of the Imperial Government was proclaimed after the collapse of the Koschinga dynasty on Formosa, but until more recent times the central government paid no attention to the "island of the eastern barbarians." The extension of the area cultivated by the Chinese on Formosa remained the private affair of the settlers; the officials sent to the island felt as if they had been banished and used the years of their exile to enrich themselves.

6: Kirchhoff--37-38 U-4 (no date) 1895 Formosans-1-3
116, 177.63 China
636.63

The slow advancement made in the more careful treatment of Formosa by the Chinese Government is reflected in the divisions into administrative districts that grow smaller in extent. At first some importance was attached to the southwest alone, and it was superficially divided into the three districts (Hsiën) of Tai-uan (now Tai-nan) in the middle, Tschu-lo in the north and Fung-schan in the south. Subordinated were the Fisher Islands and the remote Tam-sui as ting, i. e., "sea district" or, probably more correctly, "district of inferior rank." The warning rebellion of 1722 brought about the splitting of the excessively large northern district into a northern half, administered from Tschang-hua, and a southern half administered from Tschu-lo. This latter administrative center received, as a result of the self-sacrificing defense offered the rebels in 1788, the honorable name of Kia-y, i. e., "praiseworthy love of the fatherland." Until 1875 this organization of the four Hsiën (each under a Tsche-hsiën, a district president) was allowed to go on pretty much unaltered, except that [38] a few Ting were added, these being Komalan, later called Y-lan, and even the region round Tam-sui.

Then the fear of a Japanese invasion induced important reforms. Two centers of administration were now set up, a northern one in the newly created town of Tai-pe-fu, which in accordance with the Chinese custom bears the name of the district it administers*

*Tai-pe-fu is a shortened form of Tai-uan-pe-fu, i. e., the northern prefecture of Tai-uan (or Formòsa).

and a southern one in Tai-uan-fu, which now received the corresponding name of Tai-nan-fu (southern prefecture). Each of these prefectures was governed by a higher official with the title of Tsche-fu (chief president). Subject to the president of North Formosa were the following districts, each administered by a Tsche-hsiën:

1) Tam-sui,
2) Sin-tschu (formerly Ting Teuk-tscham),
3) Y-lan (formerly Ting Komalan),
4) Tai-uan (i. e., Tai-nan),
5) Fung-schan,
6) Heng-tschun,
7) Pi-lam.

Similarly the districts of the same level subject to the chief president of South Formosa were:

1) Tschang-hua,
2) Kia-y.

The south of the former district of Fung-schan (from the stream entering the sea at Pang-leao down) had also received its own Hsiën administration, and was provided with the capital of Heng-tschun, founded for this purpose, and the same was done with the

greater part of the east coast, where the former village of Pi-lam became the administrative capital of an extensive district reaching from the north to the border of Komalan. Only the Schiffer Inseln (Pung-hu) remained a Ting.

The highest administrative chief of the island was appointed as the superior of the two chief presidents or prefects of North and South Formosa, with the title of tao-taf, and his official seat was at Tai-uan-fu (now Tai-nan). Every year he had to traverse the island once, and he was the highest court of appeal in all administrative and legal matters, being immediately subject to the Governor of Fo-kiën, who had to undertake a journey of inspection in Formosa every third year. But as a consequence of the Franco-Chinese conflict, the importance of Formosa as the "eye of the Southern Sea" increased in the eyes of the Peking cabinet to such an extent that, in accord with an Imperial Decree of October, 1885, the Provincial Governor of Fo-kiën was compelled henceforth to set up his residence on Formosa itself, so that he should govern the island directly. At his side a brigadier-general commanded the Formosan garrison, which was armed in European fashion and, even in peace, numbered 10,000 or 12,000 men.

6: Kirchhoff--38 U-4 (no date) 1895 Formosans-1-2
116, 631, 177.63 China
636.63

The administration of Formosa has become even more specialized and made even more independent in the last years. According to Hosie's report, the island has now been raised to the rank of an independent Chinese province under a governor directly responsible to the central government of the Empire. At the present he resides in Tai-pe-fu. At the same time the division of Formosa into three prefectures was ordered, each of them embracing a number of sub-prefectures (hsiën, ting, tschu). They consist of the following:

I. Northern prefecture (Tai-pe-fu).
   1) Hsiën Tem-sui,
   2) " Sin-tschu (or Hsin-tschu),
   3) " Y-lan (or I-lan),
   4) Ting Ki-lung.

II. Middle prefecture (Tai-uan-fu).
   1) Hsiën Tai-uan, *

* This district must consequently have its center of administration in a town called Tai-uan; we thought we should indicate this to be to the east of Tschang-hua, where Hosie's map shows a town called Tai-nan (obviously an error in lettering).

2) Hsiën Tschang-hua,
3) " Jün-lin,
4) " Miao-li,
5) Ting Pu-li.

III: Southern prefecture (Tai-nan-fu).
1) Hsiën An-ping,
2) " Fung-schan (Feng-schan, as the English call it),
3) " Kia-y (or Kia-i),
4) " Heng-tschun,
5) Tschu Tai-tung (formerly the district of Pi-lam).

6: Kirchhoff--38 [2] U-4 (no date) 1895 Formosans
116, 206, 491, 496

But the most recent and most important advance has to do with communications. At least a beginning is being made with the construction of more substantial roads to connect the interior, the posts are being put on a systematic and unified basis and, under the first Governor, Liu-ming-tschuan, who lent an ear with unusual readiness to the counsels of foreigners, the first railroad to be approved by the Chinese Government has been built. It runs from the harbor of Ki-lung to Sin-tschu, and a continuation running via Tai-uan to Tai-nan is being prepared by means of alinement surveying (Tracenvermessung). In 1887 and 1888 the telegraph line running from Ta-kao to An-ping was carried on to Tam-sui, Tai-pe and Ki-lung, and at Tam-sui Formosa was connected by cable with the mainland, and at An-ping with the Fisher Islands.